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Stanislas Spilka, Virginie Ehlinger\*, Olivier Le Nézet, Dibia Pacoricona\*, Marcus Ngantcha, Emmanuelle Godeau\*\*\*

# Alcohol, tobacco and cannabis use during « the collège years » in 2014

In 2012, the OFDT published a first report on the levels of use among collège pupils (lower secondary school for children aged 11 to 15) based on the results of the 2010 HBSC survey (Spilka et al., 2012). These findings confirmed the considerable diffusion of tobacco, alcohol and cannabis among collège pupils, notably with very high levels of spread throughout collège, except for alcoholic beverages already displaying high levels of lifetime use among pupils in 6<sup>e</sup> (11 to 12 year olds). Four years later, the new version of the HBSC survey, comparable to the 2010 survey in every respect, specifically sheds light on the introduction to psychoactive substances among the younger generations aged 11 to 15. It provides an opportunity to identify the school ages in which the very first instances of use begin, and those in which this use develops and intensifies. This issue of Tendances provides up-to-date figures on the levels of tobacco, alcohol and cannabis use in collège years in 2014, examining the changes in these practices since 2010 (Godeau et al., 2012). It is also an opportunity to broach electronic cigarette (e-cigarette) and shisha use among collège pupils, for the first time.

French results of the most recent international « Health Behaviour in School-aged Children » survey among 11-15 year-olds.

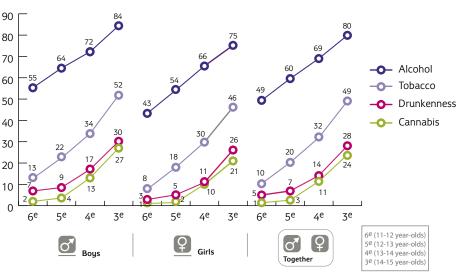


## Spread of use in collège in 2014

### Lifetime use

In 2014, **alcohol**, as has been the case for many years, is the most frequently tried psychoactive substance among *collège* pupils, far ahead of tobacco and cannabis: one in two pupils entering *collège* have

Figure 1 - Lifetime use of tobacco, alcoholic beverages, and cannabis as well as first drunkenness among collège pupils by gender and school year in 2014 (%)



Source: HBSC 2014 survey, processed by the OFDT.

<sup>\*</sup> UMR 1027 INSERM

<sup>\*\*</sup> Medical department of the Toulouse board of education (Rectorat de l'académie de Toulouse)

<sup>1.</sup> The "collège years", from "sixième" (6°) to "troisième" (3°), would be the equivalent of Secondary school in the UK or grade 6 through to grade 9 of Junior High School in the United States.

already drunk alcohol at least once in their lifetime (Figure 1). Lifetime use<sup>2</sup> of alcohol continuously increases throughout collège years, with an amplitude of 30 points between the lowest level (49.4% of 6° pupils claiming to have already tried an alcoholic beverage at least once) and the maximum level observed among 3<sup>e</sup> (14-15 year olds) pupils (79.9%). Although the increase over the four years of collège is identical among boys and girls, the latter show lower levels of lifetime use, with values approximately ten points lower, regardless of age. Although still largely affecting all collège pupils, lifetime use of alcohol appeared to decline slightly in 2014. The prevalence observed among 6e (11 to 12 year olds) or 5<sup>e</sup> (12-13 year olds) pupils is 8 to 10 points lower than that observed in 2010 (Figure 3a). The lower prevalence of lifetime use of alcohol disappears from 4e (13-14 year olds) for boys, but is maintained for girls who, in 3°, are still 8 points lower than in 2010 (75.2% vs. 83.2%). This downturn in levels among girls and the youngest pupils generally leads to a fall in the average level of lifetime use among collège pupils in 2014 (64.4% vs. 71.4% in 2010, cf. Table 1).

At the same time as the diffusion of alcohol use, the first drunkenness start to emerge. Although one in seven collège pupils claim to have already had a drunken episode, the proportion of pupils reporting to have already been drunk increases remarkably throughout collège. These levels thus increase six-fold between 6e and 3e, from 5.0% to 28.1%. Moreover, with a sex ratio<sup>3</sup> of 2.3 in 6<sup>e</sup>, boys still experience drunkenness earlier than girls. However, this difference gradually narrows until it is no longer significant in 3<sup>e</sup> (sex ratio of 1.2). Between 2010 and 2014, like alcoholic beverage use, the level of drunken episodes among collège pupils declined significantly by 4 points, i.e. a 38% drop, with this trend holding true for both genders.

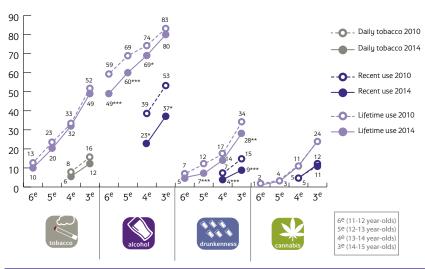
**Tobacco** is the substance which, in the past fifteen years, has been the subject of the largest number of legislative measures and initiatives aiming to limit use and delay first use among young people. Monitoring the changes in tobacco diffusion in this population is therefore a public health priority. In 2014, a third of collège pupils reported to have already had an opportunity to smoke a cigarette, varying considerably according to school year. This lifetime use is notably five times lower than for alcohol in 6° (10.3% vs. 49.4%). However, its diffusion increases fivefold during the collège years, with one in two pupils having already smoked at least one cigarette in 3<sup>e</sup>. This increase in the lifetime use of tobacco in collège differs slightly according to gender and, moreover, shows remarkable

### About the 2014 survey

For the 2014 version, the scientific board of the HBSC international survey chose to modify certain questions on drug use. This involves harmonising the wording of the statements with those currently used and recommended by international standards among the adult population, which involves investigating practices based on daily frequency: "How many days have you been [smoking cigarettes] for, if you have already started smoking?" The main disadvantage of this choice of wording is that, in 2014, it is no longer possible to monitor the changes in regular substance use which corresponds to substance use "at least ten times in the past 30 days prior to the survey"

In order to continue monitoring these findings since 2002, and given the challenges regarding tobacco smoking among young adolescents, France opted to propose the 2010 wording alongside the new 2014 wording. Owing to the very low levels of regular alcohol and tobacco use observed in 2010, among 3° pupils in particular (7% and 2%, respectively), keeping this option was not warranted as it would have made the questionnaire too complicated. Only the more substantial questionnaire sent out to 4e and 3e pupils included questions on last-month use. Furthermore, the 2014 version does not include any questions on illegal substances other than cannabis. The previous surveys showed that younger pupils were often unfamiliar with or confused rare illegal drugs, such as LSD, ecstasy, amphetamines, cocaine and heroin, resulting in less reliable estimates.

Figure 2 - Changes in tobacco, alcohol and cannabis use by school year, between 2010 and 2014 (%)



Source: HBSC 2010 and 2014 surveys, processed by the OFDT

, \*\*, \*\*\* indicate statistically significant changes at a level of 0.05, 0.01 and 0.001, respectively; Rao-Scott Chi² test taking into account the cluster effects (school, school year).

changes relative to 2010 (Figure 3b). Until now, lifetime use occurred earlier among boys, with girls then catching up and overtaking them during adolescence (from 4e in 2010). It was also the only substance for which girls had comparable or, indeed, higher levels of use, compared with boys during adolescence. In 2014, lifetime use of tobacco was still more frequent among boys (12.8% vs. 7.7% among girls in 6e); however, this 5-point difference measured in 6e persists throughout collège and girls in 3e now show less frequent lifetime use compared to their male counterparts (46.2% vs. 51.9%, respectively). Nevertheless, lifetime use of cigarettes has globally remained stable among collège

În 2014, one out of every ten collège pupils stated that they had already used cannabis. Like in 2010, lifetime use of cannabis in collège years only truly begins, when applicable, from 4°, with one in ten pupils reporting to have already smoked it at least once.

<sup>2.</sup> To see a definition of indicators used, refer to the methodology box on the last page

 $<sup>\</sup>ensuremath{\mathtt{3}}.$  For a given indicator, the sex ratio is the relationship between the percentage of boys and the percentage of girls: when over 1, it indicates a higher prevalence among boys, and under 1, vice-versa.

As for drunkenness, this lifetime use is characterised by a very substantial increase between 6e (1.4%) and the end of collège, when it is reported by nearly one in four young people (23.9%). Among younger pupils, lifetime use mainly concerns boys, whereas the differences in levels between boys and girls markedly diminish thereafter. These differences nonetheless remain statistically significant, which was not the case in 2010 as girls in 4e and 3e showed comparable levels to boys (Figure 3c).

The 6-point difference currently observed between girls and boys in 3<sup>e</sup> originates from two trends: a slight decline in levels among girls between 2010 and 2014, and a slight increase among boys in 4e and 3e. Overall, these two antagonistic trends cancel each other out, and the lifetime use of cannabis in collège in 2014, regardless of gender, proves to be identical to the levels observed in 2010.

### Recent use

Only tobacco is used daily from adolescence. This behaviour is observed in 5.6% of pupils in 4° and 12.3% of pupils in 3°, i.e. double. There is no significant difference between levels among girls and boys. Daily tobacco smoking appears to show a clear downturn in 2014, particularly among girls in 4e (5.4% vs. 8.6% in 2010).

Recent alcohol use (used at least once in the past 30 days prior to the survey) concerns slightly more than one in five 4<sup>e</sup> pupils (22.8%) and more than one in three 3<sup>e</sup> pupils (37.1%).

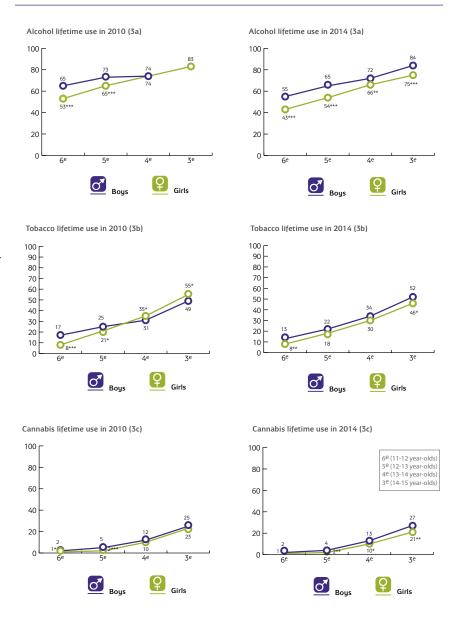
This use is still markedly observed in males, both in 4e and 3e. It also showed a sharp decline over the period considered (- 30%). This is once again the case for drunkenness, which show a major decline over the period among both boys and girls. Recent cannabis use does not show any particular changes compared to 2010.

For these three substances, the 2010 and 2014 curves on lifetime use remain relatively parallel, indicating a continuing high rate of growth in lifetime use throughout collège.

Ultimately, the most striking findings in 2014 probably concern alcohol use and drunkenness, for which lifetime use and last-month use appear to show a marked decline. Nevertheless, the stable tobacco use observed among collège pupils, in a context of a revival in tobacco smoking among adolescents (Spilka et al., 2015), also represents a major component in these latest trends.

Do these last findings bode well for lasting changes in behaviour and drug consumption among young adolescents? In 2010, HBSC findings showed a clear decline in the lifetime use of tobacco and alcohol among the

Figure 3 - Changes between 2010 and 2014 in lifetime use among collège pupils, by gender and school year (%)



Source: HBSC 2010 and 2014 surveys, processed by the OFDT.

Interpretation of Figure 3b: In 2010, girls in 3e show relatively higher lifetime use compared to bous (+ 6 points); in 2014, their lifetime use

is lower (-6 points).

\*, \*\*, \*\*\* indicate statistically significant differences at a level of 0.05, 0.01 and 0.001 between genders for each school year, for a given

youngest pupils, particularly among 13 year-olds (Spilka et al., 2012). At the same time, the ESCAPAD survey4 has, for several years, shown a decline in the age at which young people start tobacco use and a clear downturn in lifetime use of alcohol, even though the latter still largely predominates.

This trend should be examined in the light of the legislative measures including the ban on sales to minors.

These different aspects could indicate a change in perceptions and image of alcohol and, to a lesser extent, tobacco, among young people, confirming the "de-trivialisation" of these substances over several decades.

### Growing popularity of lifetime use of shisha and e-cigarettes?

Shisha (hookah) use and more recently, electronic cigarette use, have been growing for several years and appear to be attracting an increasing adolescent population. The latest European School Survey on Alcohol and Others Drugs (ESPAD) notably showed that, between 2007 and 2011, shisha use increased

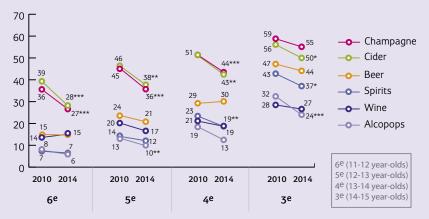
<sup>4.</sup> Survey on Health and Use on National Defence and Citizenship Day conducted among 17-year-old French adolescents attending lycée (senior high school or sixth-form college) and filling out an anonymous, self-administered questionnaire about their health and their use of psychoactive substances (including tobacco, alcohol and cannabis)

### The main alcoholic beverages drank during the year

The levels of use increase when adolescence begins, regardless of the type of alcoholic beverage (Figure 4). However, there are certain specificities per class. Although cider and champagne are most widely cited as the first beverages tried by *collège* pupils, from 3°, beer or spirits (whisky, vodka, etc.) challenge their supremacy to become the most frequently consumed alcoholic beverages in the older classes (Spilka et al., 2013). At the end of collège, among 3e pupils, the most frequently cited beverages are,

in decreasing order: champagne (55.4%), cider (50.3%), beer (44.4%), spirits (37.3%), wine (26.9%) and, lastly, alcopops (24.1%). In 2014, the hierarchy of the types of alcoholic beverages consumed is finally identical to that observed in 2010, with one exception: wine is now very slightly ahead of alcopops in 3°. Nonetheless, a downward trend is observed in the majority of this alcohol use, with beer and wine being the only alcoholic beverages to have remained stable between 2010 and 2014.

Figure 4 - Types of alcoholic beverages consumed at least once in the last year, by school year (%)



Source: HBSC 2010 and 2014 surveys, processed by the OFDT.

N.B. \*, \*\*, \*\*\* indicate statistically significant changes between 2010 and 2014.

Interpretation: In 6°, 28% of pupils drank cider at least once in the last year and 15% beer. Although a marked (statistically significant) decline is observed for cider between 2010 and 2014 (39% vs. 28%), this is not the case for beer.

Table 1 - Levels of drug use among collège pupils in 2014 by school year and gender (%)

		Class	Boys	Girls	Sex ratio		All	All 2010	All 2014
	Tobacco	6e	12.8	7.7	1.7	**	10.3	- - 30.2	27.8 →
		5 <sup>e</sup>	22.4	18.0	1.2	ns	20.3***		
		4 <sup>e</sup>	33.8	29.8	1.1	ns	31.9***		
		3 <sup>e</sup>	51.9	46.2	1.1	*	49.1***		
	Alcohol	- 6e	55.3	43.3	1.3	***	49.4	- - 71.4 -	64.4 🔰
		5 <sup>e</sup>	64.5	54.2	1.2	***	59.6***		
Lifetime use		4 <sup>e</sup>	72.2	65.5	1.1	**	69***		
		3 <sup>e</sup>	84.4	75.2	1.1	***	79.9***		
etir	Drunkenness	- 6 <sup>e</sup>	6.9	2.9	2.3	**	5.0	· 17.5	13.4 🗸
5		5 <sup>e</sup>	8.5	5.1	1.7	*	6.9 <sup>+</sup>		
		4 <sup>e</sup>	17	10.9	1.6	***	14.1***		
		3 <sup>e</sup>	30.2	26.1	1.2	ns	28.1***		
	Cannabis	6 <sup>e</sup>	2.0	0.9	2.2	ns	1.4	- - 10.2 -	9.8 →
		5 <sup>e</sup>	3.6	1.5	2.4	**	2.6+		
		<b>4</b> <sup>e</sup>	13.0	9.6	1.4	*	11.4***		
		3 <sup>e</sup>	27.0	20.8	1.3	**	23.9***		
	Daily tobacco	4 <sup>e</sup>	5.7	5.4	1.1	ns	5.6	11.8	8.9 🗸
		3 <sup>e</sup>	12.5	12.1	1.0	ns	12.3***		
es	Alcohol use in the last 30 days	4 <sup>e</sup>	26.8	18.6	1.4	***	22.8	45.8	29.9 🔰
t us		3 <sup>e</sup>	43.3	30.9	1.4	***	37.1***		
Recent uses	Drunkenness in the last 30 days	4 <sup>e</sup>	5.4	2.2	2.4	***	3.9	10.8	6.3 🔽
		3 <sup>e</sup>	9.8	7.8	1.3	ns	8.8***		
	Cannabis use in the last 30 days	<b>4</b> <sup>e</sup>	5.4	3.9	1.4	ns	4.7	7.9	8.2 →
		3 <sup>e</sup>	12.7	10.9	1.2	ns	11.8***		

Source: HBSC 2010 and 2014 surveys, processed by the OFDT.

 $6^e$  (11-12 year olds);  $5^e$  (12-13 year olds);  $4^e$  (13-14 year olds);  $3^e$  (14-15 year olds)

Interpretation: In 6°, 12.8% of boys and 7.7% of girls reported to have already smoked cigarettes in their life, and the difference was significant p < 0.01 (sex ratio of 1.7 with \*\*\*). The arrows show the direction of the variation (statistically significant) between 2010 and 2014.

N.B. The \* indicate statistically significant differences between genders whereas the + indicate a significant increase between two successive school years.

among adolescents aged 16 (34% and 53%, respectively), confirming the interest in this method of use in this population (Dautzenberg et al., 2007; Spilka et al., 2015). According to the HBSC survey, 17.2% of collège pupils reported, in 2014, to have already used a hookah, with levels increasing from 5.3% to 35.7% between 6e and 3e. Shisha use without prior cigarette use is, however, rare and only applies to 2.9% of collège pupils, which tends to confirm that it is merely an additional method of tobacco use. Perhaps adolescents perceive hookah use as more sociable and better adapted to certain social situations? They might also believe it is less harmful.

As regards e-cigarettes, despite the high similarity in use with cigarettes ("smoked", hand-mouth movements, presence of nicotine, etc.), the stakes are different. Although no clear harm has been established to date, certain authors suggest that e-cigarettes could be a gateway to tobacco smoking among younger children and promote future nicotine addiction (Dautzenberg et al., 2013 ; Leventhal et al., 2015). It should be pointed out that the impact of electronic cigarettes on future tobacco smoking is still the subject of intense debates. Furthermore, in recent years, its use has become somewhat popular among adults (Beck et al., 2015) and, to a lesser extent, among adolescents, where lifetime use has nonetheless been shown to be independent of tobacco use (Andler et al., 2015; Spilka et al., 2015).

In the HBSC survey, practically four in ten 4e and 3e pupils (39.4%) report to have already used an e-cigarette. Nevertheless, most of them were still only at the lifetime use stage at the time of the survey. Only a small number of pupils claimed to already use it daily (1.9%). Lifetime use increases slightly between 4° and 3° (33.8% vs. 45.1%), with girls having tried it less than boys (38.8% vs. 51.4% in 3°, for example).

Furthermore, Figure 5 shows that the majority of young people trying e-cigarettes also try tobacco (30.3%), confirming the considerable overlap between these two methods of use in adolescence (Spilka et al., 2015). However, the proportion of lifetime users not having smoked tobacco is relatively high (9.0%), suggesting that the motives for use among adolescents differ to some extent from adult motives.

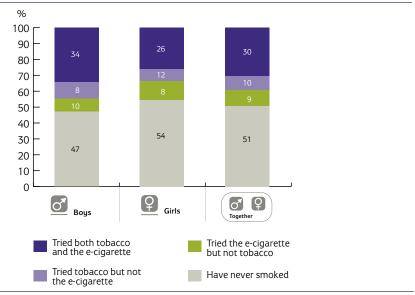
Moreover, if we examine the age of lifetime use among young people having tried tobacco and the electronic cigarette, it clearly appears that lifetime use of the latter occurs on average more than a year later than for cigarettes (13.7 years vs. 12.8 years). Somewhat logically, young people starting e-cigarettes before tobacco are in the minority and only represent 7.8% of those having tried both substances. Lifetime use in both cases occurred in the same year for slightly over a third of young people, although we cannot know in which order this took place. These findings suggest that e-cigarettes do not currently represent a gateway to cigarette use, but other investigations, of a more qualitative nature, on motives and image, would be necessary in order to support this hypothesis.

### Conclusion

The French results of the 2014 HBSC survey highlight a few key trends:

✓ Lifetime use, such as recent alcohol use, appears to be in marked decline in 2014. It nonetheless confirms the pre-eminence of alcohol in adoles-

Figure 5 - Lifetime use for tobacco and e-cigarettes among 4e (13-14 year olds) and 3e (14-15 year olds) pupils (%)



Source: HBSC 2014 survey, processed by the OFDT.

cence which is the first psychoactive substance tried by collège pupils, with already half of lifetime users in 6°.

✓ The first drunkenness, occurring at a later stage, also appear to be less frequent than in 2010.

✓ Tobacco, for which lifetime use in collège is still less widespread than for alcohol, shows the least gender-based differences although lifetime use is now lower and daily smoking begins later among girls than for boys, compared to 2010.

✓ Lifetime use of cannabis remained stable compared to 2010. While still very rare among younger pupils (11-13 years), it still shows strong growth through the collège years, affecting nearly one in four 3e pupils in 2014.

✓ Lifetime use of shisha observed among collège pupils, quantified for the first time, shows that this method of use is very popular among adolescents. ✓ Electronic cigarette use mainly concerns cigarette smokers, like in the adult population.

The 2014 survey reinforces the lessons drawn from the 2010 survey. The collège years are still a key period for the lifetime use of psychoactive substances, with major variations between one year and the next. This reality should be taken into consideration when creating prevention strategies so as to better target areas of intervention in collège by school year and according to behaviours observed in terms of lifetime use.

The 2014 HBSC findings confirm that substance use behaviour is not starting increasingly early as initiation seems to be taking place even slightly later than a few years ago.

However, the latest ESCAPAD survey showed increasing use of the main substances between 2011 and 2014 among 17 year-olds.

These results, observed in a collège setting, at the beginning of adolescence, may correspond to a delay in lifetime use or, on the contrary, foreshadow a real change in behaviour with regard to psychoactive substances among part of this new generation.

Cannabis diffusion is stable, becoming more significant at the end of collège, as was the case four years ago.

The first recommendation of the French National Institute of Health and Medical Research (INSERM) collective expert report on addictive behaviours among adolescents reiterated the importance of preventing initiation or delaying the age of substance use (INSERM collective expert report, 2014). The decline in lifetime use is undeniably therefore a positive point in the latest results. We now need to endeavour to identify the determining factors for this decline which also appears to be observed in other Western countries.

### Methodological reference points

The HBSC is an international survey conducted every four years since 1982 under the auspices of the European office of the World Health Organization (WHO).

At present, 43 countries or regions, mainly in Europe, including France since 1994, have been taking part and collecting data among pupils aged 11, 13 and 15, using a standard methodology, on their health, school experience and positive or negative health behaviours, including lifetime use and general use of psychoactive substances. Since 2010, the French sample is also representative of all collège pupils in mainland France, according to the different school years. From April to June 2014, 10,434 pupils educated in mainland France, from CM2 (10-11 year olds, corresponding to the last year of primary school) to the first year of lycée (15-16 year olds, corresponding to the first year of senior high-school), in 286 public or private schools under

contract with the French national education authority, completed a strictly anonymous self-administered questionnaire in class, under the supervision of a trained interviewer (Ehlinger et al., 2016).

The survey is coordinated by the medical department of the Toulouse board of education in conjunction with INSERM U1027, the Ministry of National Education, the National directorate on school teaching (DGESCO), the Performance and prospective studies department (DEPP), the Association for the development of French HBSC and the INPES (French National Institute for Prevention and Health Education).

Since the 2002 survey, the OFDT has been one of the major sources of funding for the survey and has been working to help develop the section of the questionnaire pertaining to "drug use" as well as the analysis of the results and their transmission.

### Use is illustrated by the following indicators:

lifetime use: use at least once in a lifetime;

| French National Education Authority, all staff who

orench National Education Authority, all stall Who enabled this survey to take place under the best possible conditions in each of the sampled schools. Catherine Arnaud, Epidemiologist at INSERM UMR 1027 – Université Paul Sabatier, Toulouse and Félix Navarro, medical advisor of the Toulouse board of education. Members of the Surveys and Statistical Analysis Unit (EAS) of the OFDT who contributed to the statistical analyses. Lastly, the publis who

to the statistical analyses. Lastly, the pupils who

agreed to take part.

- recent use or use in the last month: at least one day of use in the month prior to the survey;
- daily tobacco use: use at least once daily in the last 30 days;

These indicators describe use during adolescence in a simple way. The concept of use at some point in life (or lifetime use) encompasses users as well as adolescents who have just tried or abandoned their use. Although it therefore does more to describe the diffusion of a substance in a population than its use, it proves particularly well suited to monitoring initiation among young people for whom substance use has not often had the opportunity to recur or become rooted in a lifestyle or habit.

### bibliography

ANDLER R., GUIGNARD R., WILQUIN J.L., BECK F. and NGUYEN-THANH V., « L'usage de la cigarette électronique en France en 2014 », Évolutions, INPES, n° 33, 2015, 6 p.

BECK F., RICHARD J.-B., GUIGNARD R., LE NÉZE-TO. and SPILKA S., Levels of drugs use in France in 2014, Tendances, OFDT, n° 99, 2015, 8 p.

DAUTZENBERG B., BERTHOLON J.F., BECQUE-MIN M.H., LETTIERO Y. and PENFORNIS C., Waterpipe tobacco smoking (narghile) survey in France, 2007, BEH - Bulletin épidémiologique hebdomadaire, n° 21, 2007, pp. 183-185.

DAUTZENBERG B., BIRKUI P., NOËL M., DOR-SETT J., OSMAN M. and DAUTZENBERG M.-D., « E-cigarette: A new tobacco product for schoolchildren in Paris », Open Journal of Respiratory Diseases, Vol. 3, n° 1, 2013, pp. 21-24.

EHLINGER V., SPILKA S., RICHARD J.-B. and GODEAU E., La santé des collégiens en France / 2014. Données françaises de l'enquête internationale Health Behaviour in School-aged Children (HBSC). Méthodologie générale, Saint-Denis, INPES, 2016, 6 p.

GODEAU E., NAVARRO F. and ARNAUD C., La santé des collégiens en France / 2010. Données françaises de l'enquête internationale Health Behaviour in School-aged Children (HBSC), Saint-Denis, INPES, 2012, 250 p.

INSERM, Conduites addictives chez les adolescents: usages, prévention et accompagnement, Paris, INSERM, coll. « Expertise collective », 2014, 482 p.

LEVENTHAL A.M., STRONG D.R., KIRKPATRICK M.G., UNGER J.B., SUSSMAN S., RIGGS N.R., STONE M.D., KHODDAM R., SAMET J.M. and AUDRAIN-MCGOVERN J., « Association of electronic cigarette use with initiation of combustible tobacco product smoking in early adolescence », Journal of the American Medical Association, vol. 314, n° 7, 2015, pp. 700-707.

SPILKA S. and LE NÉZET O., Alcohol, tobacco and cannabis use during the « lycée years », Tendances, OFDT, n° 89, 2013, 8 p.

SPILKA S., LE NÉZET O., BECK F., EHLINGER V. and GODEAU E., Alcohol, tobacco and cannabis during the « collège years », Tendances, OFDT, n° 80, 2012, 6 p.

SPILKA S., LE NEZET O., NGANTCHA M. and BECK F., Drug use in 17-year-olds: analysis of the ESCAPAD survey, Tendances, OFDT, n° 100, 2015, 8 p.

### tendances

Editor in chief Julie-Émilie Adès

